Contents Volume 7 (1991)

Special Issue

Validation of flow and transport models for the unsaturated zone, edited by P.J. Wierenga

Introduction, by P.J. Wierenga (Guest Editor) vi
Parameter estimation for simulating binary homovalent cation transport in aggregated soils at variable ionic strength
R. Schulin, A. Paptritz, H. Flühler (Zürich, Switzerland) and H.M. Selim (Baton Rouge, LA, U.S.A.) 1
Ion chromatography of fresh- and salt-water displacement: Laboratory experiments and multicomponent transport modelling
H.E. Beekman and C.A.J. Appelo (Amsterdam, The Netherlands) 21
Length scales of convection–dispersion approaches to flow and transport in porous media
P.F. Germann (New Brunswick, NJ, U.S.A.) 39
Statistical and graphical methods for evaluating solute transport models: Overview and application
K. Loague (Berkeley, CA, U.S.A.) and R.E. Green (Honolulu, HI, U.S.A.) 51
Deterministic and stochastic modeling of reactive solute transport
S.E.A.T.M. van der Zee and G.H. Bolt (Wageningen, The Netherlands). 75
Conditional simulation of flow and transport
A.S. Rogowski, J.K. Wolf and D.E. Simmons (University Park, PA, U.S.A.) 95
Calibration and validation of a modified steady-state model of crop response to saline water irrigation under conditions of transient root zone salinity
A.J.A. Vinten (Edinburgh, U.K.), H. Frenkel, J. Shalhevet (Bet Dagan, Israel) and D.A. Elston (Edinburgh, U.K.) 123
Toward validating state-dependent macroscopic anisotropy in unsaturated media: Field experiments and modeling considerations
J.T. McCord (Pullman, WA, U.S.A.), D.B. Stephens and J.L. Wilson (Socorro, NM, U.S.A.) 145

Guide for Authors

Review Paper
Laboratory diffusion testing for waste disposal — A review
C.D. Shackelford (Fort Collins, CO, U.S.A.) 177

Research Papers
Seasonal and weather-related controls on solute concentrations and acid drainage from a pyritic coal-refuse deposit in southwestern Indiana, U.S.A.
G.A. Olyphant, E.R. Bayless and D. Harper (Bloomington, IN, U.S.A.) 219
Cosorption of aromatic N-heterocycles and pyrene by smectites in aqueous solutions
S.J. Traina and B.M. Onken (Columbus, OH, U.S.A.) 237
Fluid flow and solute transport processes in unsaturated heterogeneous soils: Preliminary numerical experiments
C.C.K. Liu (Honolulu, HI, U.S.A.), K. Loague (Berkeley, CA, U.S.A.) and J.-S. Feng (Honolulu, HI, U.S.A.) 261
Importance of closely spaced vertical sampling in delineating chemical and micro-biological gradients in groundwater studies
R.L. Smith (Lakewood, CO, U.S.A.), R.W. Harvey (Menlo Park, CA, U.S.A.) and D.R. LeBlanc (Marlborough, MA, U.S.A.). 285

Research Papers

Simultaneous transport of parent and daughter compounds in aquifers with linear first-order kinetics
F.T. Lindstrom and L. Boersma (Corvallis, Oreg., U.S.A.) 301
Optimum allocation of monitoring wells around a solid waste landfill site using precursor indicators and fuzzy utility functions
S. Morisawa and Y. Inoue (Kyoto, Japan) 337
Long-term effects of soil heterogeneity on cadmium behaviour in soil
A.E. Boekhold and S.E.A.T.M. van der Zee (Wageningen, The Netherlands) 371